SUBJECT: LA-6 Model

DATE: January 26, 1934.

TO ALL OFFICES:-

We release herewith the Fifth Installment of Machine Service Bulletin No. 161, Plates 38 to 50 inclusive, which illustrate and describe the method to be followed in assembling the LA-6 model.

Carry through unit-

1-Insert shaft (N) in hole (G) of end plate (H). Insert shaft (S) in hole (F) and secure it to the end plate (H) by installing nut (C) upon the threaded end and tightening the nut securely. Place the end of shaft (M) against the end plate (H) and align (M) with hole (E). Insert (B) in (E) and screw securely into shaft (M). Install shaft (W) against end plate (H) and align with hole (D). Insert (A) in (D) and screw securely into shaft (W). Install spacing sleeves, one of which is shown as (Z), on shafts (W) and (M). Place an extra carry gear (K) on shaft (N) with the round shape tooth gear to the left against the end plate. Install a check pawl (Y) on shaft (S) with the smaller lug to the left against the end plate and the large lug engaging the pointed tooth gear. Install a partition plate (X) on the shafts and position (X) against the spacers (Z), check pawl (Y) and gear (K). Insert the spring rod (Q) in the rear hole of the partition plate (X) and part way in the end plate hole (J). Attach the check pawl spring to rod (Q). Continue this sequence of assembling and secure the end partition plate by placing a #4338 spacing collar shown as (P) on screw (R) and installing (R) in shaft (M). Place a #4309 bearing, shown as (U), and a #4340 spacing collar, shown as (V), on screw (T) and install (T) part way in shaft (W). Remove screw (A) and nut (C).

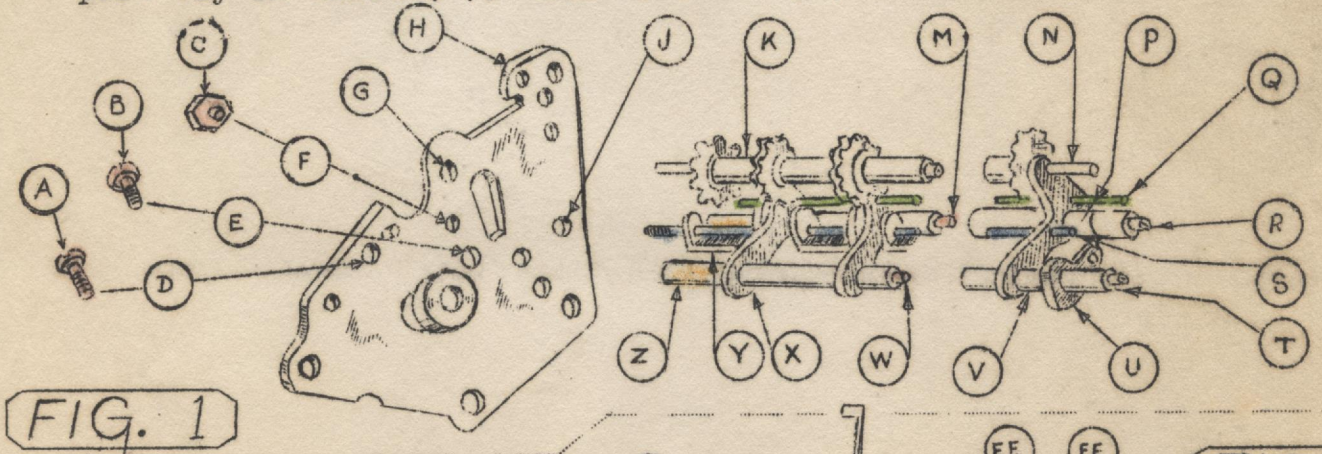


FIG. 1

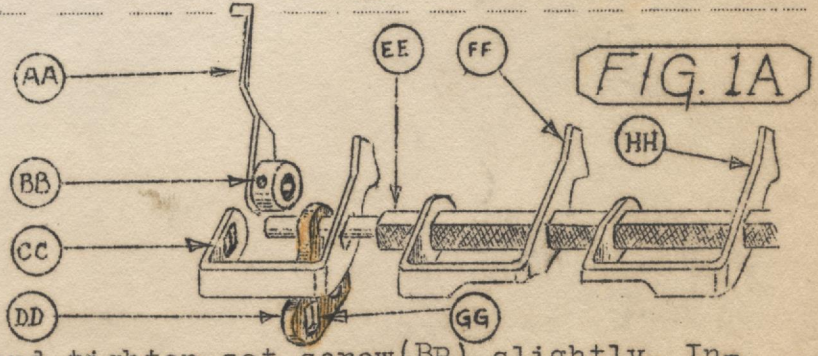


FIG. 1A

Position trip pawl(CC) part way on shaft(EE) and install bearing(DD) on shaft(EE) with the elongated hole(GG) under CC). Install the trip lever AA) on shaft(EE). Continue the installation of pawl (CC) on shaft(EE). Position the trip lever(AA) parallel with the lugs on the trip pawl(CC) and tighten set screw(BB) slightly. Install two trip pawls, identical to(CC), on shaft(EE) and position them against pawl(CC). Pawls(FF) and(HH) are then installed on(EE) followed by three regular pawls which complete the assembly.

(2)Position the trip arm shaft assembly (L) in its proper relation to the extra carry gears (K). Install hole (E) of bearing (G) over post (D). Align hole (F) with hole (C) and shaft (B). Insert screw (H) through blank (J) and install in holes (C) and (F) and shaft (B). Tighten screw (H) securely.

FIG. 2

Position hole (T) over the end of shaft (U).

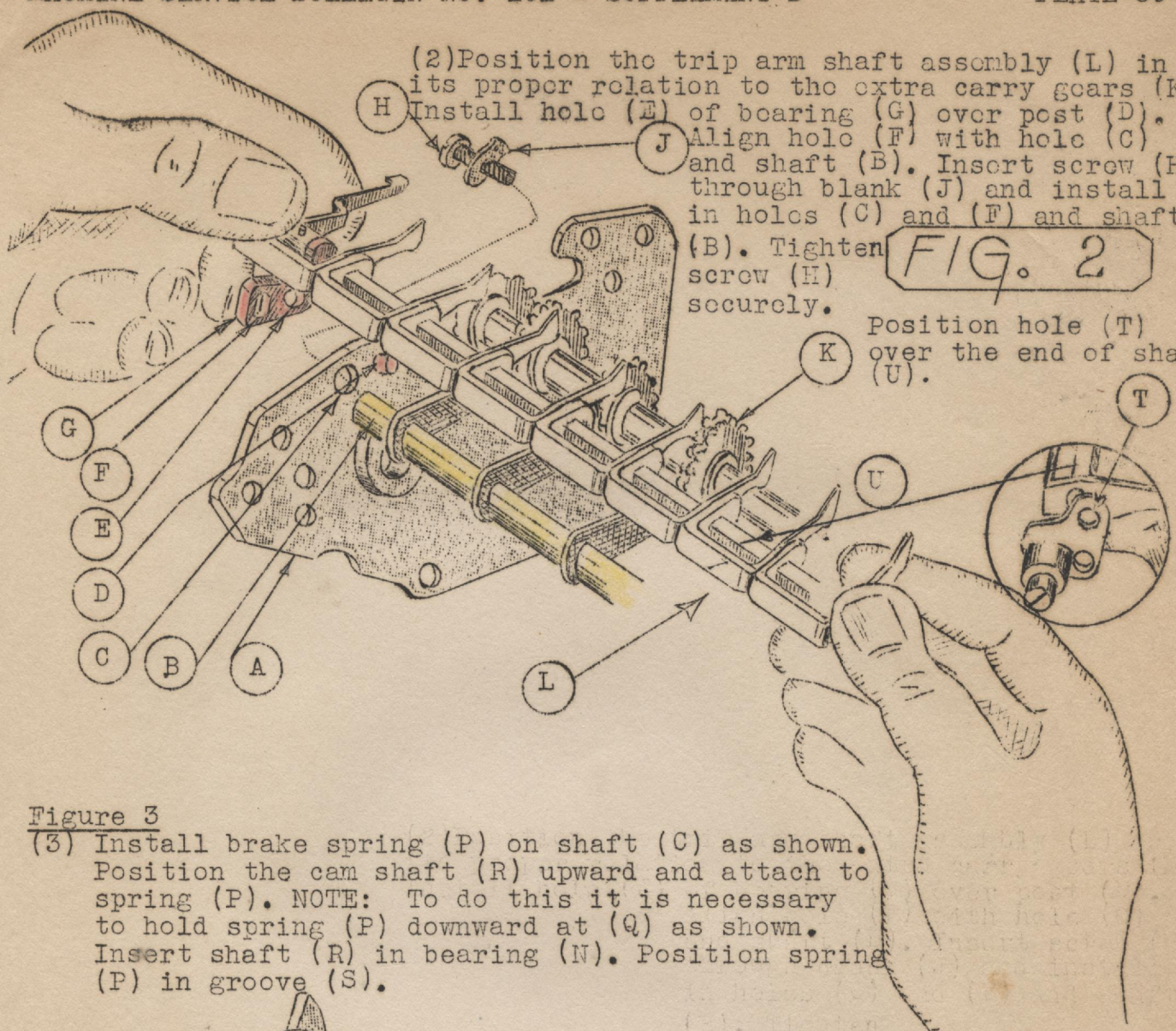
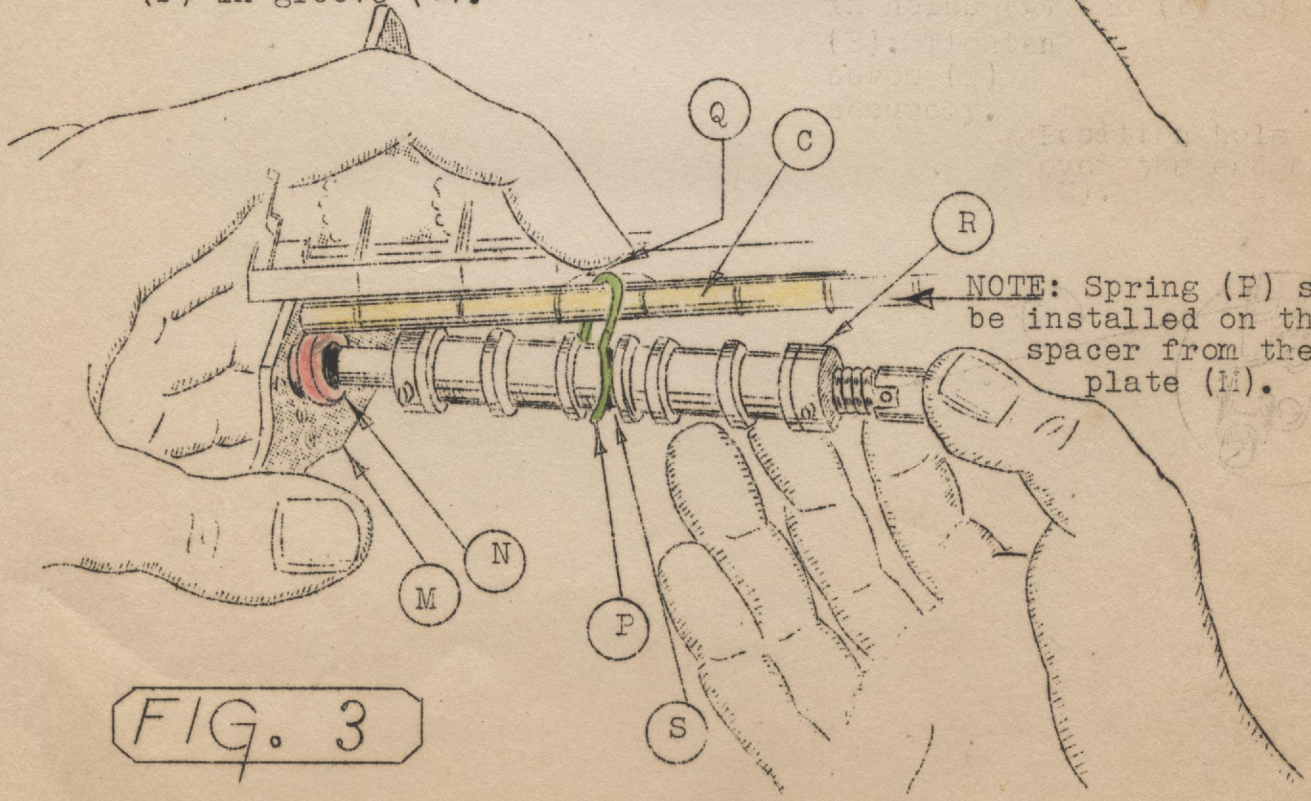


Figure 3

(3) Install brake spring (P) on shaft (C) as shown. Position the cam shaft (R) upward and attach to spring (P). NOTE: To do this it is necessary to hold spring (P) downward at (Q) as shown. Insert shaft (R) in bearing (N). Position spring (P) in groove (S).



NOTE: Spring (P) should be installed on the 4th spacer from the end plate (M).

FIG. 3

(4) Insert the section thus far assembled, in the unit shell (H). Install the cam shaft (D) in bearing (G) and insert screw studs (C) and (K) in holes (E) and (J). Position hole (B) in bearing (A) over post (F). Note: The hole shown as (B) represents the lower hole in bearing(A).

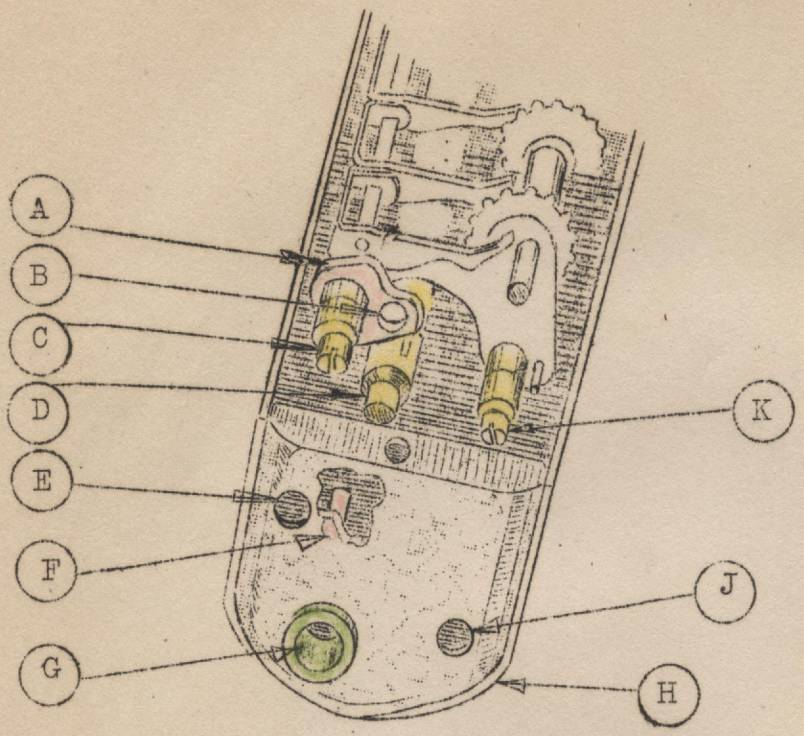


FIG. 4

(5) Insert screws (L) through the unit shell (M) and end plate (N) and tighten securely.

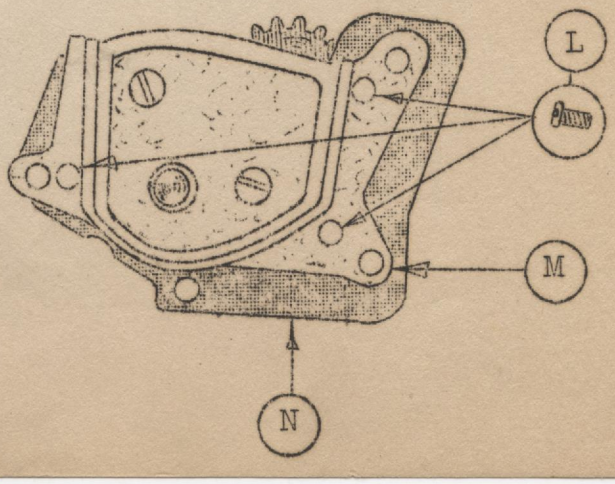
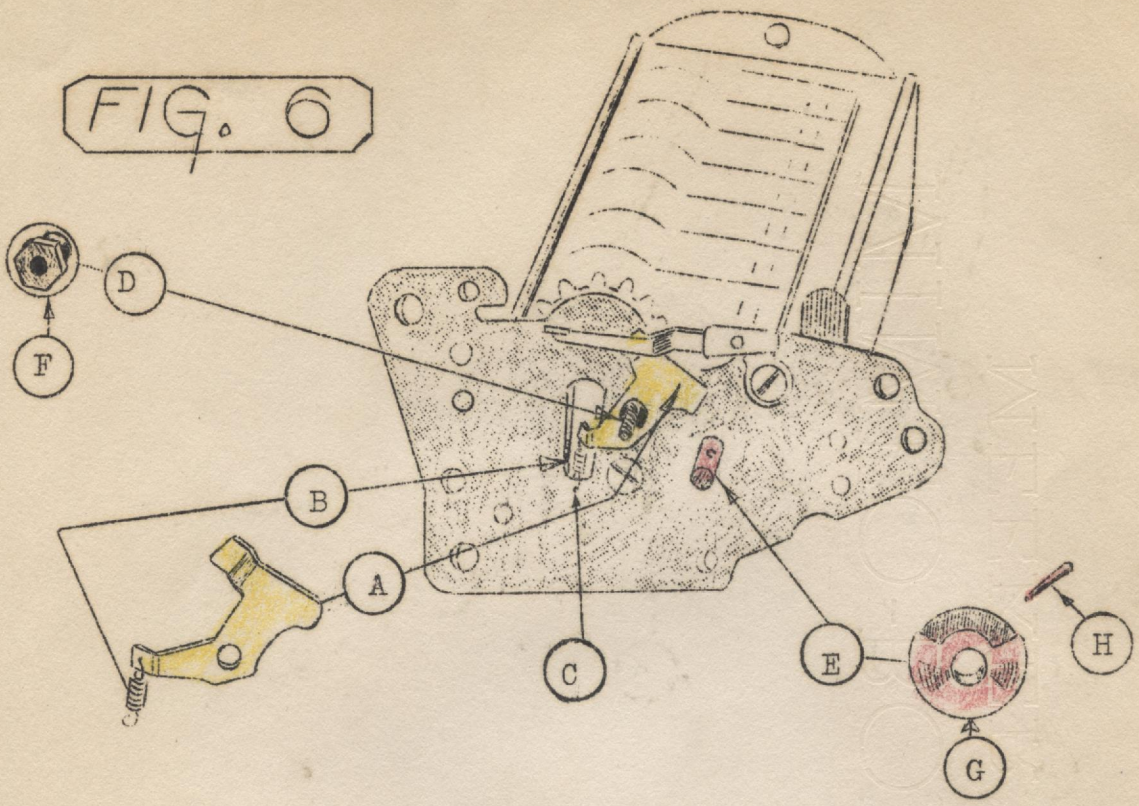


FIG. 5

(6) Attach spring (B) to check pawl (A). Install check pawl (A) on shaft (D) as shown and secure with nut (F). Place cam assembly (G) on shaft (E) and insert taper pin (H). Attach spring (B) to the end plate by inserting the loop in hole (C).

FIG. 6



(7) Install fibre washers shown as (K) on the screws shown as (J). Install bracket (M) on the unit (L) and secure with screws (J).

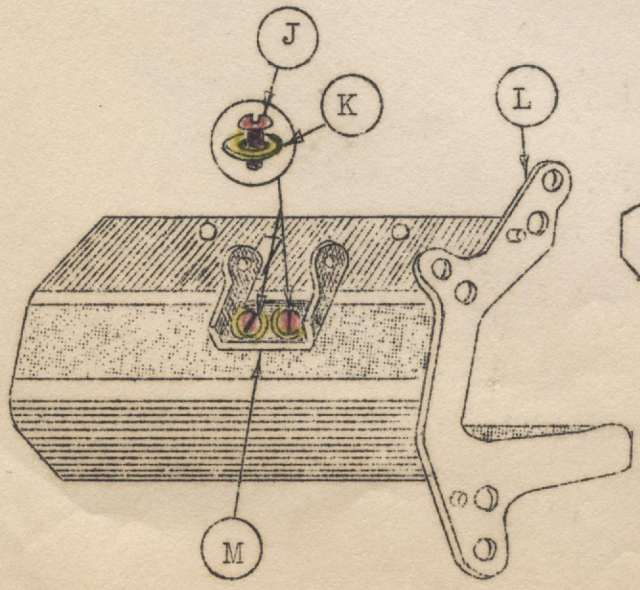


FIG. 7

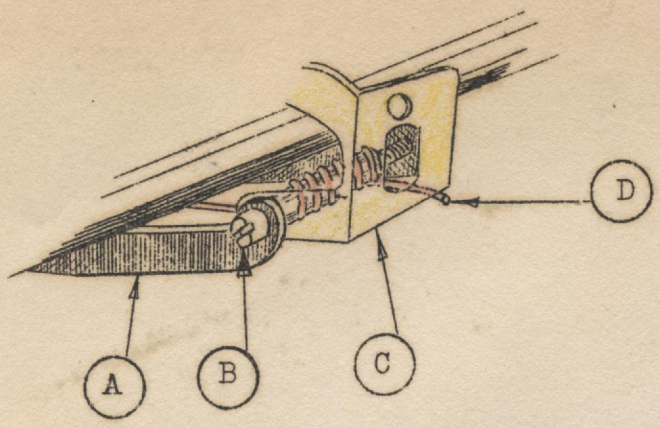


FIG. 8

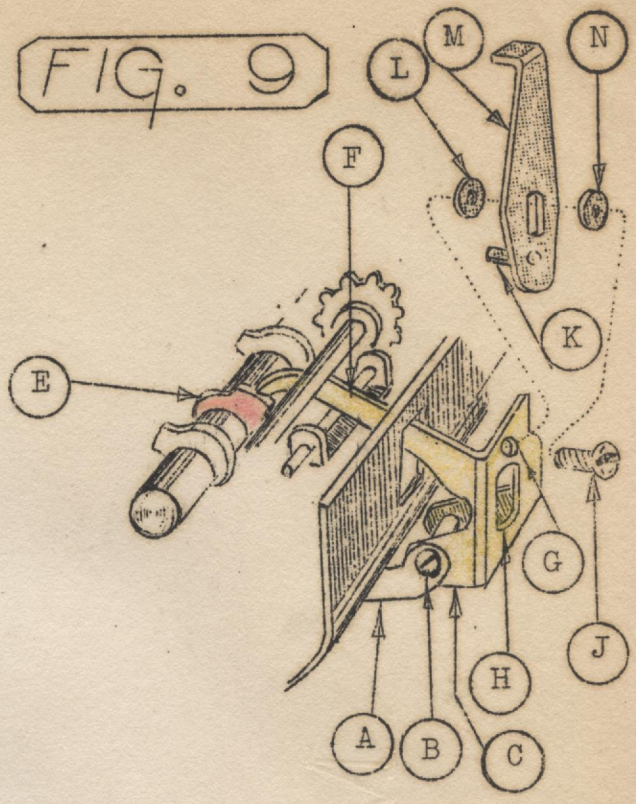


FIG. 9

Figure 9
Install arm (F) of lock lever (C) on cam (E) as shown, and attach (C) to bracket (A) by inserting the threaded end of screw stud (B) through the bracket (A) and lug of the lock lever (C).

Figure 8
Install spring (D) on screw stud (B) and insert (B) through the right hand lug of lock lever (C) and bracket (A), and position the ends of spring (D) as shown, with the short end positioned under lever (C).

Figure 9
Insert screw (J) through washer (N), lock bar (M) and washer (L), and install in hole (G). Insert stud (K) in hole (H).

Figure 10
(8) Install arm (P) on shaft (V) and insert taper pin (Q). Position the shaft through the bracket and install collar (U). Install the coupling collar (X) on shaft (V) and insert taper pin (W).

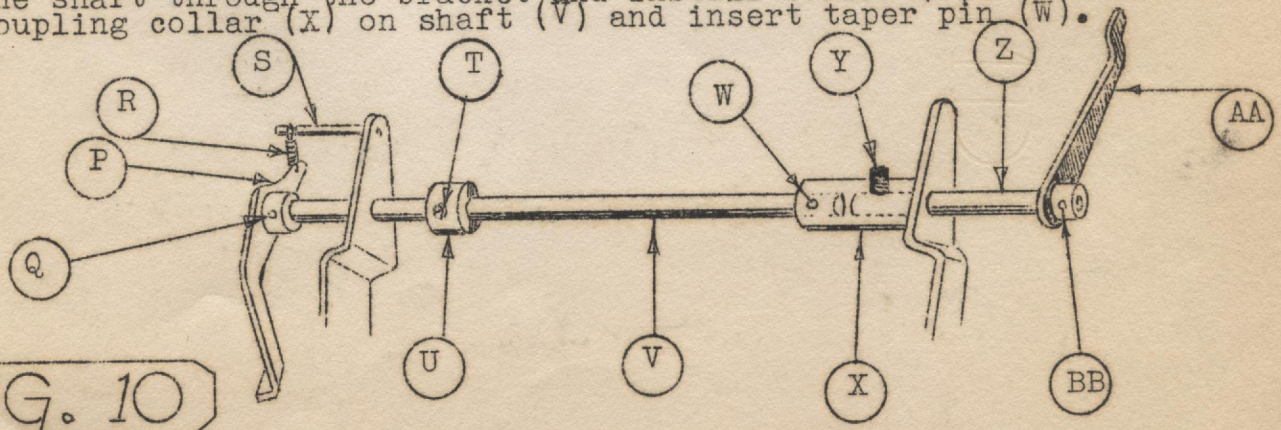
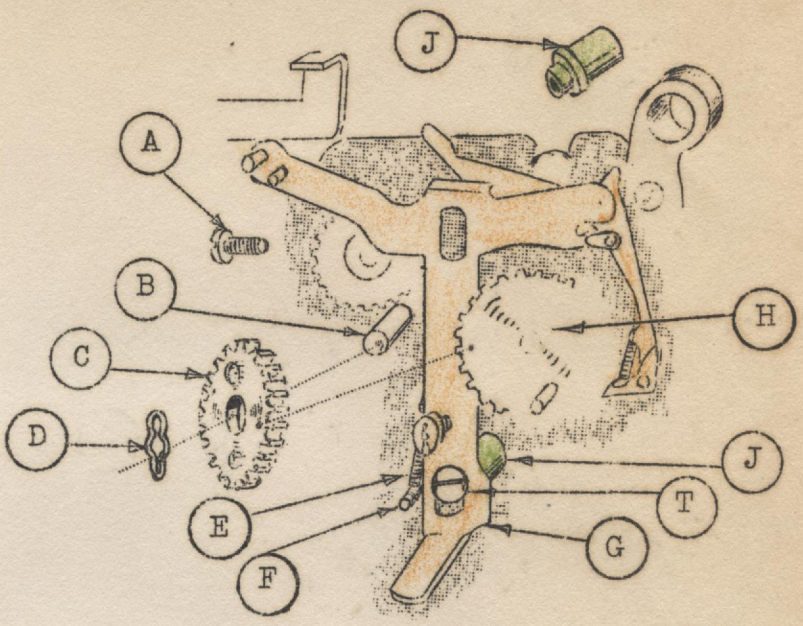


FIG. 10

Attach spring (R) to post (S). Install arm (AA) on shaft (Z) and insert taper pin (BB). Insert shaft (Z) through the bracket and coupling collar (X) as far as possible and secure by tightening set screw (Y). Allow slight end play in (V) and tighten (T).

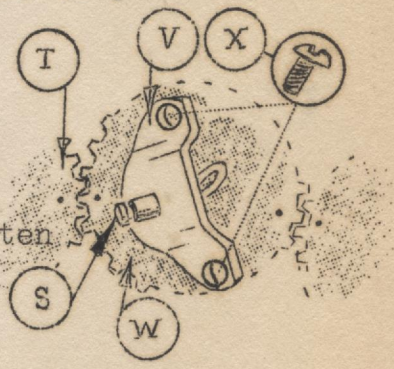
(9) Install assembly (G) as shown. Install spacer (J) in the upper hole and insert screw (A). Insert lower spacer (J) as shown, and insert screw (T). Determine that assembly (G) is free of binds. Attach spring (E) to post (F). Install gear (C) on post (B) and secure with retaining ring (D). Align the dot on gear (C) with the dot on gear (H) as indicated by dotted line.

FIG. 11



(10) Install screw (Q) in guide blank (R) and position the blank as shown. Install the counting finger (M) on stud (S) and position (M) in relation to stud (P) as shown, and hook up spring (N). Drop the blank (R) into position as shown. Determine that finger (M) is free from interference. Install washer (L) on post (S) and secure with retaining clip (K).

NOTE: To install bracket (V) ascertain that the machine is in neutral and the dots on the gear train are aligned. Position the bracket (V) on the gear (W) with post (S) toward gear (T), and insert screws (X). After the adjustment described on Plate 11, Machine Service Bulletin No. 161 has been made, tighten screws (X) securely.



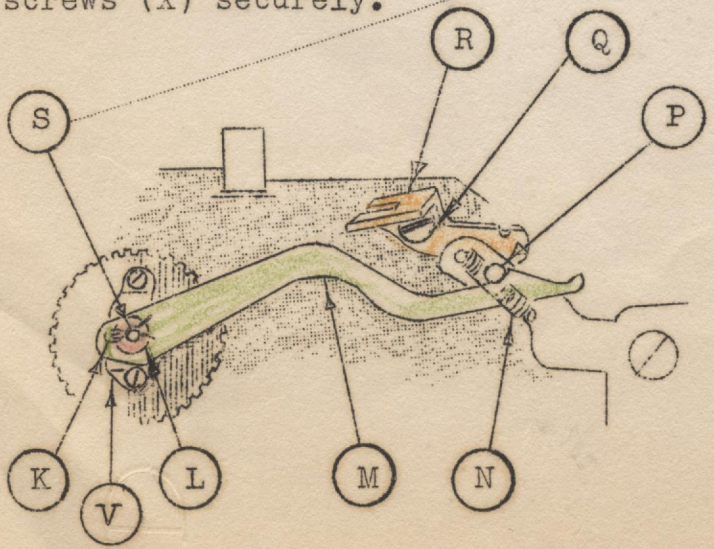


FIG. 12

(11) Insert screw (R) through latch (U) and spacer (Q) and insert in hole in side frame, as shown, and secure screw (R) with a #70 lock washer located at (P) and a #1256 nut shown as (N). Place lug (W) in notch in latch (U) as shown. Insert screw (X) through latch (U) and spacer (Y), and insert in hole in side frame. Secure screw (X) to the side frame with a #77 nut. Attach spring (T) to post (S) being careful that it does not interfere with the movement of the latch (U).

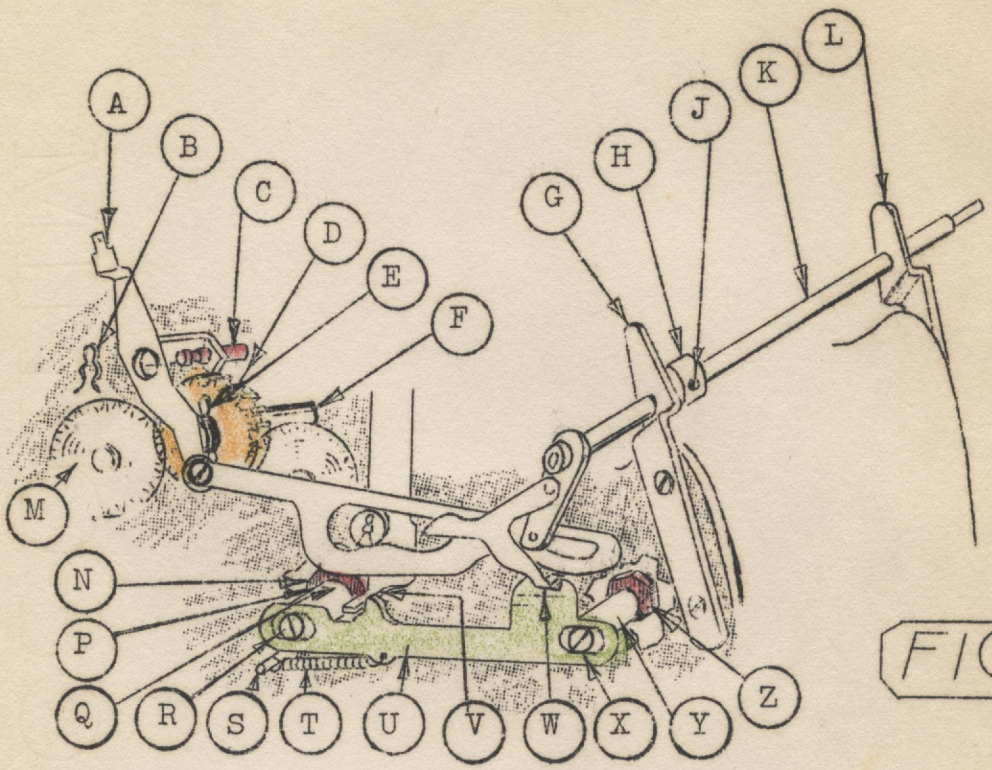


FIG. 13

(12) Insert shaft (K) through bracket (G) and collar (H). Install lever (A) part way on post (C), as shown. Install idler gear (D) on post (F). Align the dot on gear (D) with the dot on gear (M) and install retaining ring (E). Latch lug (V) on (U) and complete the installation of shaft (K) through bracket (L), and lever (A) on post (C). Install retaining clip (B) on post (C). Allow slight end play in shaft (K) and tighten set screw (J) securely.

(13) To install link (E) insert end (J) under guide (D), swing end (J) upward as indicated by arrow (F), and install (E) on stud (G). Lift click (H) upward and move link (E) inward. Drop click (H) into position. Loosen set screw (J) and slightly withdraw shaft (K). (Figure 13, Plate 44). Position arm (C) on shaft (M). Position the division lever in neutral and insert taper pin (A) in hole (B). Restore shaft (K) to its original position and tighten set screw (J). (Figure 13, Plate 44.)

NOTE: Link (E) may be removed from arm (C) by removing screw (K) and its retaining nut. Link (E) may be assembled to arm (C) by inserting screw (K) in link (E) and arm (C) and securing (K) with the nut removed. After link (E) has been installed on stud (G) and arm (C) adjust screw (K) as directed on Plate 7 of Machine Service Bulletin No. 161.

Ascertain that the switch closing arm stud identified as (L) on the clutch yoke does not interfere with link (E). To overcome such a condition bend link (E) outward.

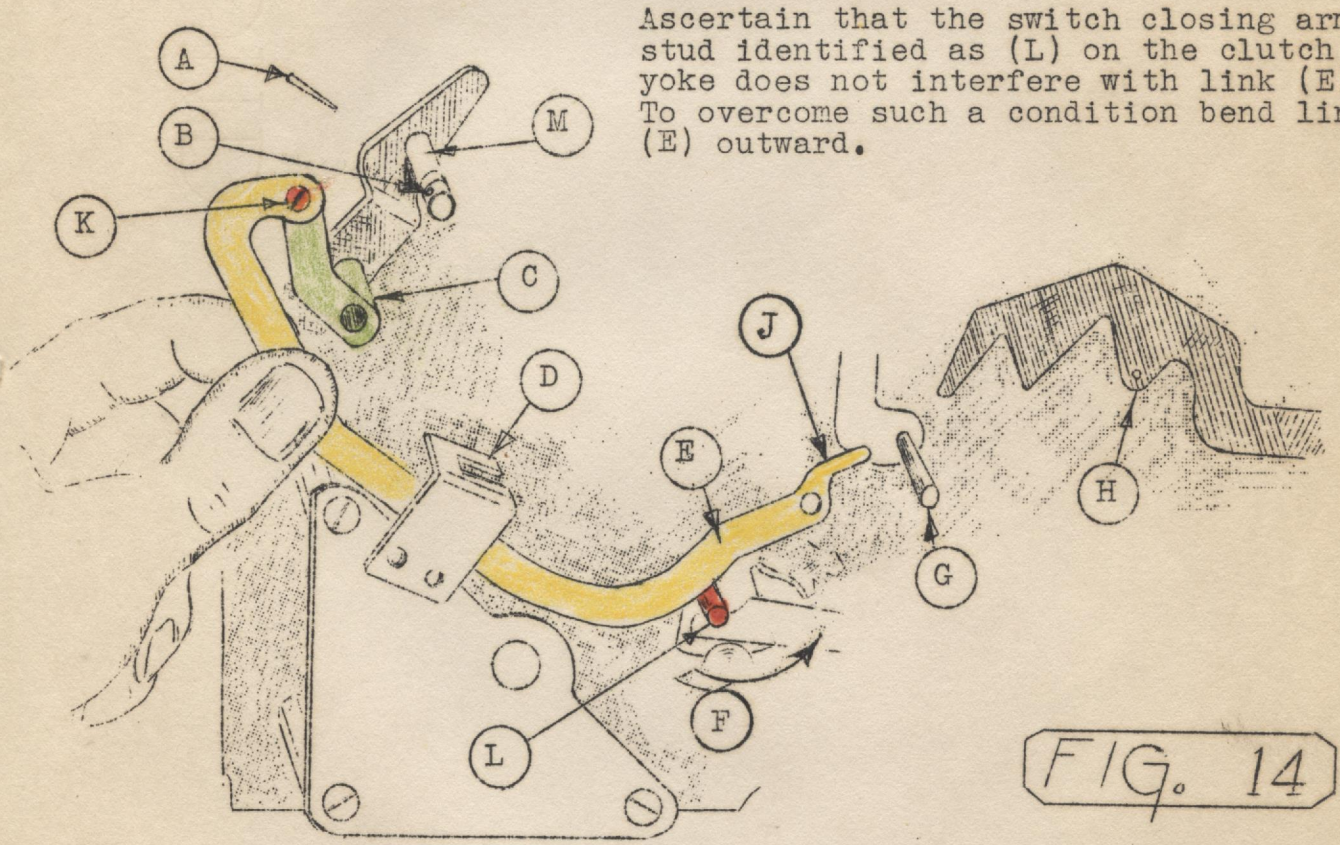


FIG. 14

(14) Install the keyboard in the machine, as shown on Plate 31, Supplement C, and insert screw (H) by positioning the mechanism as shown in Figure 3, after which reposition guide blank (A) to its original position. Position the mechanism as shown in Figure 4, and insert the proper screw in hole (C) after which restore guide blank (B) to its original position. Install the two front keyboard screws.

(15) Locate spring (A) on post (E) as shown. Position the end of the pivot bar (C) over end (B) of the spring with lug (D) located at (G) under post (E). Insert end (F) of the spring in the slot of the cross frame as shown.

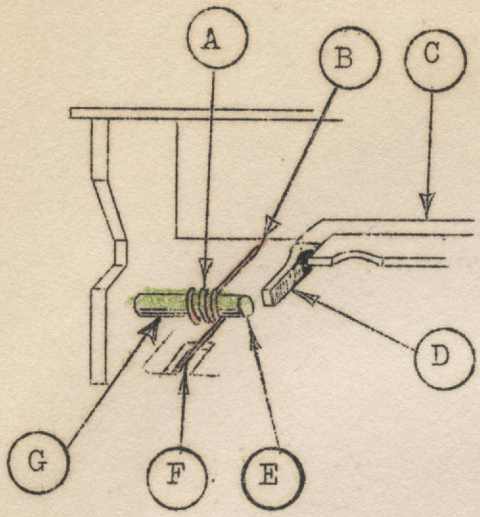
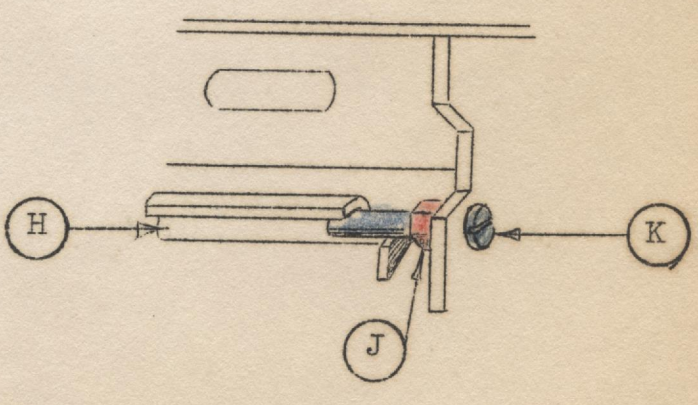


FIG. 15

FIG. 16



While holding the master clear key upward insert the end of screw stud (K) through the side frame and install nut (J) upon it. Continue the inward movement of (K) until nut (J) can be tightened in place. Locate pivot bar (J) over the end of (K) as shown.

(16) Insert screw (A) through the eye of wire (C). Screw (A) securely in bracket (B), as shown.

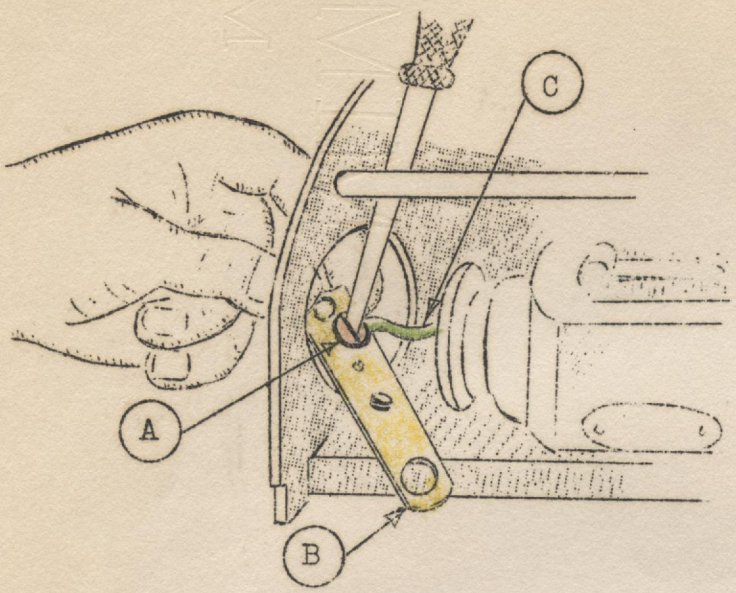


FIG. 17

(17) To install the locator arm (D) and the bracket (G), depress them together as shown and position them over the screw and collar (F) of the bracket (B). NOTE: Depressing (D) and (G) is necessary to pass the roller of (D) under the tie rod (E).

Position the machine as shown on Plate 35, Supplement C, and assemble the brackets to the side frame with the screws, washers and spacers shown. Ascertain that the bakelite washers are installed on both sides of bracket (D) as shown in Figure 11, Plate 35.

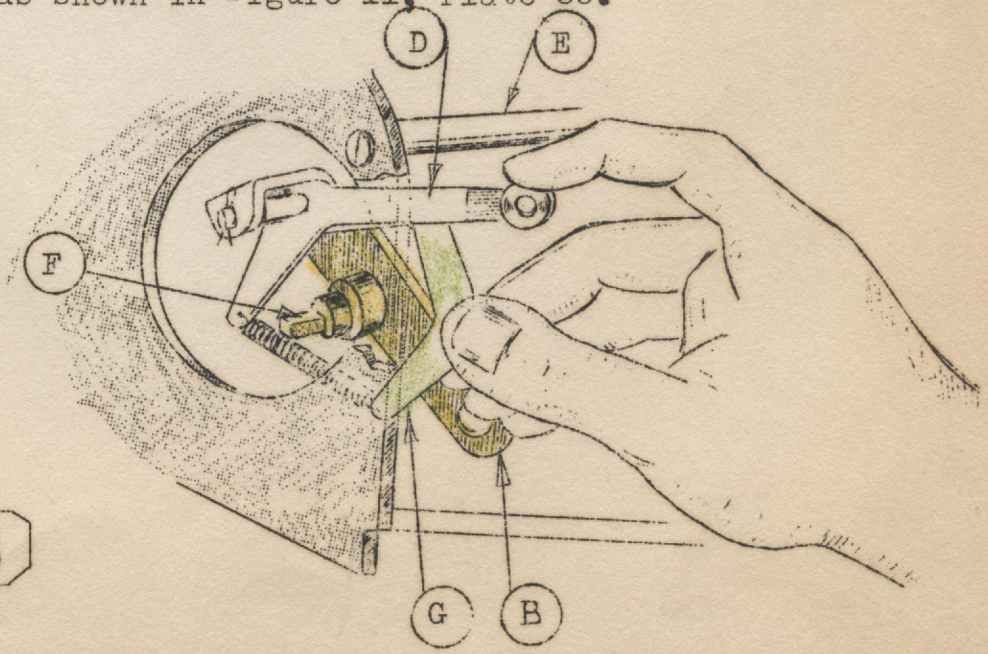


FIG. 18

(18) Install the carry-through unit on the machine as directed on Plate 3, Machine Service Bulletin No. 161.

ASSEMBLE THE LA-6W CARRIAGE AS INSTRUCTED BELOW:-

(1) Place the carriage case in assembling position with the carriage rack toward the operator. Install eccentric stud (Q) in the case and secure by tightening nut (R).

(2) Place nut (T) on the upper dial shaft (E) and install the shaft in the case, positioning the shaft as far to the right as possible.

(3) Install the clear-out gears and carriage clear handle mechanism in the usual manner.

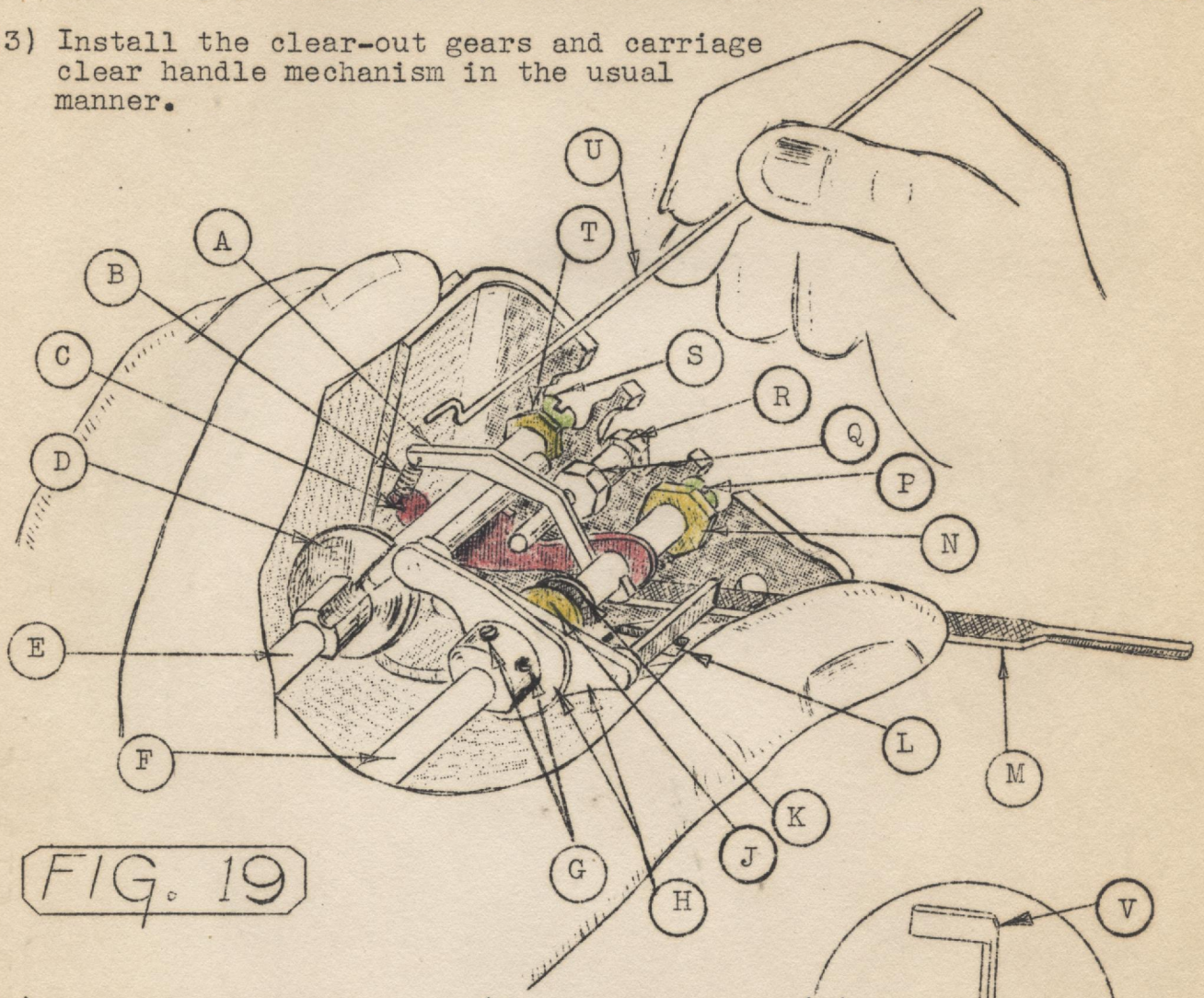


FIG. 19

(4) Assemble the rocker arm (H), constant key (K), washer (J) and nut (N) on the trip rod shaft (F). Install the restoring lever (V) on the left hand end of the trip rod shaft (F). See Figure 20.

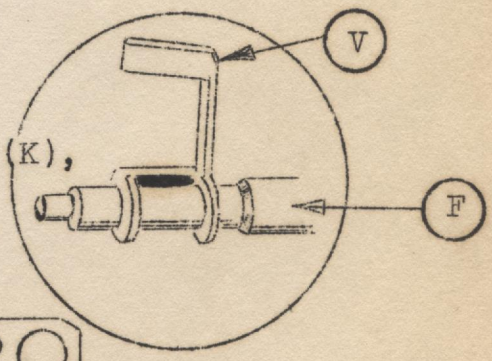


FIG. 20

(5) Insert the constant key in slot (L) and oscillate it with kit tool #14.
Unless this is done while positioning the key in location, the key jams in the keyway of the trip rod shaft (F).

NOTE: To assemble the LA-5 carriage, proceed as instructed above with the exception of omitting the constant key (K) and washer (J) together with paragraph 5.

Figure 19, Plate 48

(6) Install the trip rod shaft (F) carefully to avoid the scratching of the upper dials by the trip fingers.

(7) Attach spring (B) to arm (A).

(8) Install arms (A) and (C) as shown.

(9) Install bearings (S) and (P) and secure by tightening nuts (T)and (N).

(10) Insert a small file (kit tool #21) under arm (C). Apply pressure with thumb as shown and attach spring (B) to arm (C) by using a push hook shown as (U).

Figure 21

(11) Install spring (U) on the lift cam shaft (C).

(12) Install the lift cam shaft (C) in the usual manner and insert pin (A).

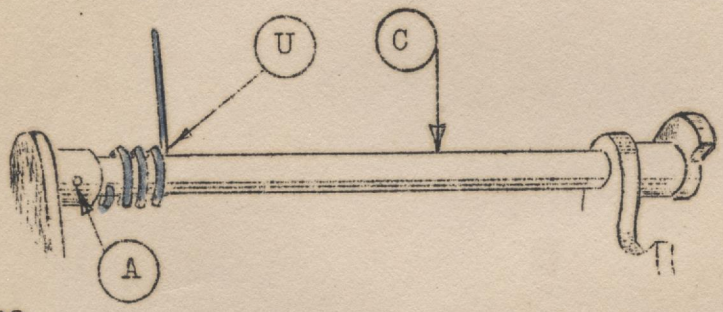


FIG. 21

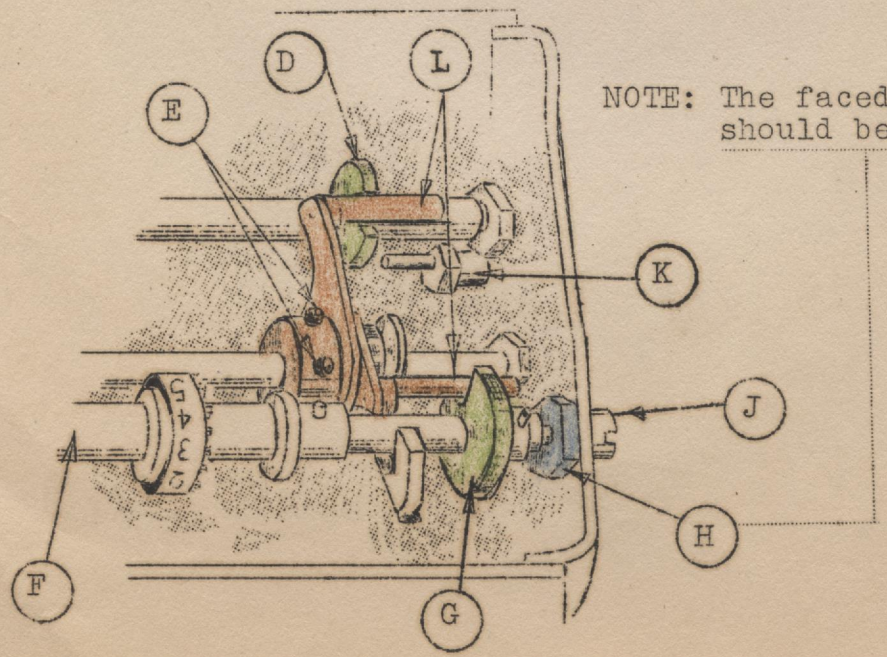
Figure 22

(13) Place special nut (H) on the lower dial shaft (F) and install the shaft in the case as shown.

(14) Adjust the rocker arms (L) in their proper relation to cams (D) and (G) and tighten set screws (E) securely.

(15) Adjust eccentric stud (K) in the usual manner.

Install bearing (J) on shaft (F) and secure with nut (H).



NOTE: The faced side of nut (H) should be upward as shown.

FIG. 22

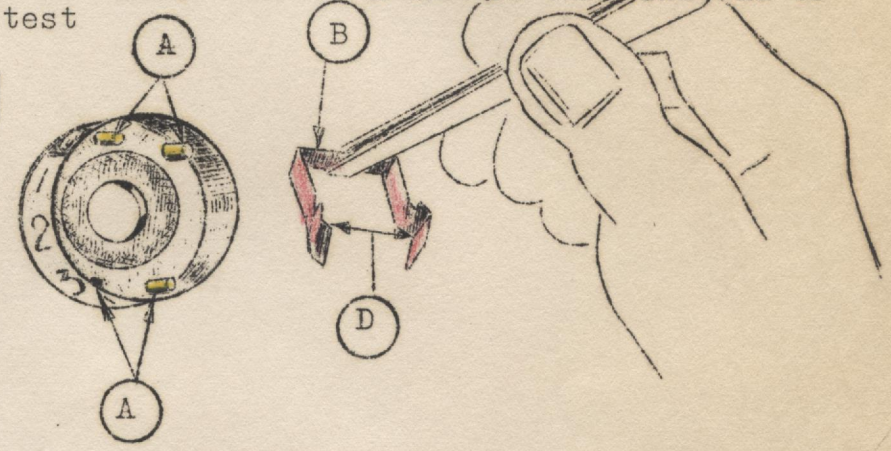
The procedure to be followed in assembling the mechanism of a constant dial is as follows:

(1) (Figure 23) With the use of kit tool #25 install spring (B) on either pair of posts (A), ascertaining that the lugs (D) on the spring (B) are upward. Make certain that the spring seats on the inner face of the dial. See that the spring aligns with the edge of the hole in the dial as shown in Figure 24. To secure this condition which assures proper tension on the index ring (C), bend the spring with kit tool #25 at (E) to suit.

Figure 25
Insert the index ring (C) in the dial and while holding downward with the fingers insert kit tool #34 under the index ring and withdraw lugs (D) until they fit in the notches of the index ring (C).

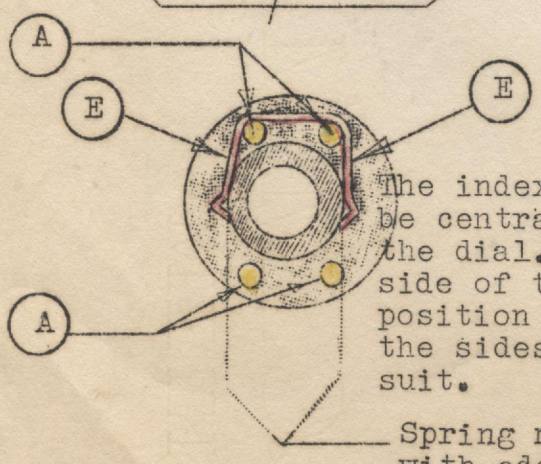
When assembling the registering dial shaft, test the tension of spring (B) by grasping the pin (F) on the index ring and attempting to turn the ring. If the index ring turns and the dial does not turn it proves that the spring is too weak. The dial should turn instead of the index ring when this test is made.

FIG. 23



When replacing carriage dial collars remove the burrs before assembling.

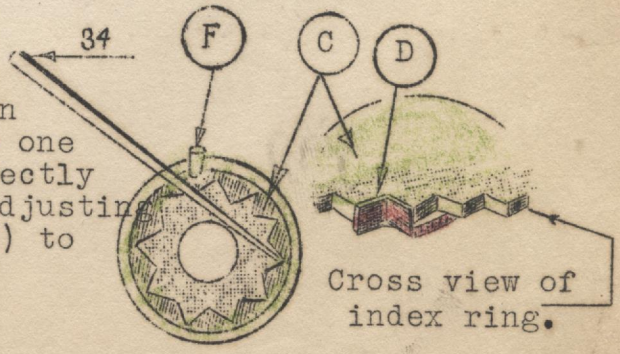
FIG. 24



The index ring should be centrally located in the dial. If it favors one side of the dial, correctly position the ring by adjusting the sides of spring (B) to suit.

Spring must align with edge of hole.

FIG. 25



Cross view of index ring.